#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-009151 Address: 333 Burma Road **Date Inspected:** 18-Sep-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 645 **Project Name:** SAS Superstructure **OSM Departure Time:** 1845 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Xu Xian Ping No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component: OBG & TOWER Components** 

**Summary of Items Observed:** 

On this date Caltrans OSM Quality Assurance (QA) Inspector, Sandeep Kumar was present during the times noted above for observations relative to the work being performed.

BAY 1

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #001 located on Counter Weight CW002B – PP080. Welder is identified as 219189. ZPMC QC is identified as Tian Lei. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2133.

BAY 2

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #011 located on Floor Beam FB3083 – 002. Welder is identified as 062438. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the

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WPS - B - T - 2132 - 3.

FCAW process welding of weld joint #047 located on Floor Beam FB3094 – 001. Welder is identified as 206358. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2233 - Tc - U4b - F.

FCAW process welding of weld joint #036 located on Floor Beam FB3083 – 003. Welder is identified as 045203. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2133.

FCAW process welding of weld joint #039 located on Floor Beam FB3022 – 001. Welder is identified as 215676. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2233 - Tc - U4b - F.

BAY 3

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #003 located on Longitudinal Diaphragm LD003 – 056. Welder is identified as 051356. ZPMC QC is identified as Yin Dong Hai. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2132 - 3.

SMAW process welding of weld joint #006 located on Longitudinal Diaphragm LD001 – 047. Welder is identified as 044304. ZPMC QC is identified as Yin Dong Hai. The welding variables recorded by QC appeared to comply with the WPS -B - P - 2112.

FCAW process welding of weld joint #008 located on Longitudinal Diaphragm LD003 – 056. Welder is identified as 051356. ZPMC QC is identified as Yin Dong Hai. The welding variables recorded by QC appeared to comply with the WPS -B - T - 2133.

BAY 5

Magnetic Particle Testing

This QA inspector performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

- 1.11TR2 013 004
- 2.11TR2 015 004
- 3.11TR2 002 002
- 4. 11TR2 001 002
- 5. 11TR2 004 002

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- 6. 11TR2 005 002
- 7.  $TR7B PP8.5 001 \sim 005$  (Weld repair areas on base material)
- 8. TR8B PP8.5 001 ~ 005 (Weld repair areas on base material)

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #003 located on Traveler Rail Bracket TR5B – PP085. Welder is identified as 066064. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS -B - T - 2232 - Tc - U4c - F.

FCAW process welding of weld joint #003 located on Traveler Rail 11TR1 – 029. Welder is identified as 217805. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2231 - B - U2 - F.

FCAW process welding of weld joint #003 located on Traveler Rail Bracket TR5B – PP061. Welder is identified as 068858. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS -B - T - 2232 - Tc - U4c - F.

FCAW process welding of weld joint #004 located on Traveler Rail 11TR2 – 018. Welder is identified as 215689. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2231 - B - U2 - F.

BAY 6

This QA Inspector observed the following work in progress:

**TOWER** 

SMAW process welding of weld joint #7A located on WD1 – A305 – 77M – 1. Welder is identified as 053753. ZPMC QC is identified as Su Zhen Rong. The welding variables recorded by QC appeared to comply with the WPS - 485 - SMAW - 2G (2F) FCM - Repair - 1.

SMAW process welding of weld joint #1A located on WD1 – A305 – 65M – 2. Welder is identified as 049769. ZPMC QC is identified as Su Zhen Rong. The welding variables recorded by QC appeared to comply with the WPS - 485 - SMAW - 2G (2F) FCM - Repair - 1.

SMAW process welding of weld joint #2A located on WD1 – A305 – 77M – 4. Welder is identified as 067707. ZPMC QC is identified as Su Zhen Rong. The welding variables recorded by QC appeared to comply with the WPS - 485 - SMAW - 2G (2F) FCM - Repair - 1.

SMAW process welding of weld joint #8A located on WD1 – A305 – 65M – 2. Welder is identified as 048659. ZPMC QC is identified as Su Zhen Rong. The welding variables recorded by QC appeared to comply with the WPS - 485 - SMAW - 2G (2F) FCM - Repair - 1.

SMAW process welding of weld joint #8B located on WD1 – A305 – 77M – 4. Welder is identified as 053753.

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ZPMC QC is identified as Su Zhen Rong. The welding variables recorded by QC appeared to comply with the WPS - 485 - SMAW - 2G (2F) FCM - Repair - 1.

Cross Beam - 9

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #019 located on Cross Beam CB202A – 009. Welder is identified as 048625. ZPMC QC is identified as Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2132.

FCAW process welding of weld joint #069 located on Floor Beam FB204 – 021. Welder is identified as 053609. ZPMC QC is identified as Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2232 - Tc - U4b - F.

SMAW process welding of weld joint # 143 / 161 located on Cross Beam CB202G – 022. Welder is identified as 070007. ZPMC QC is identified as Liu Chuan Gang. The welding variables recorded by QC appeared to comply with the WPS -B - P - 2113.

BAY 7

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #031 located on Side Plate SP3026 – 017. Welder is identified as 051246. ZPMC QC is identified as Zhong Dian Xing. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2233 - Tc - U4b - F.

FCAW process welding of weld joint #052 located on Side Plate SP3026 – 017. Welder is identified as 051246. ZPMC QC is identified as Zhong Dian Xing. The welding variables recorded by QC appeared to comply with the WPS - B - T - 2233 - Tc - U4b - F.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

#### **Summary of Conversations:**

No Relevant Conversations.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

**Inspected By:** Kumar, Sandeep Quality Assurance Inspector

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**Reviewed By:** Prue,Erik QA Reviewer